

REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested. Currently, claims 1-8, 10, 13-21, 23 and 25-38 are pending in this application.

Objection to the Title:

The title was objected to as allegedly being not descriptive. By this Amendment, Applicant has provided a new title, and thus Applicant respectfully requests that the objection to the Title be withdrawn.

Objection to the Drawings:

The drawings were objected to because the reference characters identified in the drawings having the form "S.x.xx" did not match identically with instances of "step x.xx" recited in the specification. The specification has been amended to recite step "S.x.xx", thereby matching the reference characters provided in the drawings. Applicant therefore respectfully requests that the objections to the drawings be withdrawn.

These amendments to the specification are being provided in a substitute specification. The substitute specification is being submitted with a marked-up copy showing all changes made relative to the immediately prior version of the specification of record. Applicant submits that no new matter has been added by the substitute specification.

Rejection Under 35 U.S.C. §101:

Claims 1-12 were rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Claim 12 has been canceled. With respect to method claims 1-11, Section 5 (page 3) of the Office Action alleges that these claims "neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process." Section 5 of the Office Action

further states “In order for a process to be ‘tied’ to another statutory category, the structure of another statutory category should be positively recited in a step or steps....”

By this Amendment, independent claim 1 has been amended to require, among other things, “storing, *in a computer-readable storage medium*, object models...”, “receiving, *in a computer*, a further video image...” and “detecting, *utilizing the computer*, objects in the received video image....” Accordingly, Applicant submits that claim 1 is sufficiently “tied” to another statutory category via the positive recitation of structure of another category (namely, a “computer storage medium” and a “computer”).

Applicant therefore submits that claims 1-11 are directed to a statutory process under 35 U.S.C. §101 and thus respectfully requests that the rejection of these claims be withdrawn.

Rejections under 35 U.S.C. §102 and §103:

Claims 1-4 and 12-17 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Park et al. Claims 9 and 22 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Park and further in view of Lo et al (U.S. ‘435, hereinafter “Lo”).

Anticipation under §102 of the Patent Act requires that a prior art reference disclose every claim element of the claimed invention. See, e.g., *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1574 (Fed. Cir. 1986). Park fails to disclose every claim element of the claimed invention. For example, Park fails to disclose “wherein if a detected object is not matched to an object model then a new object model is stored corresponding to the detected object, and the method further comprises counting, utilizing the computer, the number of consecutive video images for which each object is tracked, and outputting, utilizing the computer, a tracking signal indicating that tracking has occurred if an object is tracked for a

predetermined number of consecutive frames,” as required by independent claim 1. Similar comments apply to independent claims 13 and 14.

Independent claim 1 has thus been amended to require, among other things, the limitations of original (and now canceled) claim 9 of the present application. Independent claim 13 has also been amended to require, among other things, the limitations of original (and now canceled) claim 9 of the present application. Similarly, independent claim 14 has been amended to include the limitations of original (and now canceled) claim 22.¹

With respect to the limitations required by former claim 9 and now required by independent claim 1 (“counting the number of consecutive video images for which each object is tracked, and outputting a tracking signal indicating that tracking has occurred if an object is tracked for a predetermined number of consecutive frames”), Section 29 (page 11) of the Office Action admits that Park “does not disclose outputting a signal to indicate that an object has been tracked for a certain number of frames.” Park thus clearly fails to anticipate claims 1, 13 and 14.

The Office Action then alleges that Lo (citing col. 6, lines 55-57) resolves the above-admitted deficiencies of Park with respect to claim 9 (and inferentially claim 1 which now requires the limitations of claim 9). However, Applicant submits that Lo does not in fact resolve the admitted deficiencies of Park. In particular, the above-cited portion of Lo discloses combining three images to generate a “background” image. One image is subtracted from the

¹ Applicant notes that the Written Opinion of the International Searching Authority in counterpart International Application No. PCT/GB2004/004687 indicates that claims 9 and 22 meet the requirements for novelty (N), inventive step (IS) and industrial applicability (IA). In particular Section 4 of the Written Opinion of the International Searching Authority states “In contrast to the foregoing, the subject matter of claims 6-7, 9-10, 19-20, 22-23 appears to be neither disclosed nor straightforwardly derivable from the considered prior art. Each of the claims 6, 7, 9, 10 defines a way of rendering the tracking more robust by reacting ‘gracefully’ to various conditions:...claims 9, 22: newly occurring blobs are only treated as new objects if they persist over a number of frames (thus avoiding sensitivity w.r.t. ‘noisy’ blobs).”

background image to recognize an object. There is, however, no disclosure in Lo of counting the number of occurrences of the object as claimed, nor of outputting a signal indication that this count has reached a predetermined level. Accordingly, even if Lo and Park were combined as proposed by the Office Action, the combination would not have taught or suggested all of the limitations required by claim 9. Similar comments apply to independent claims 13 and 14.

Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §102 over Park and the rejection under 35 U.S.C. §103 over Park in view of Lo be withdrawn.

Claims 5 and 18 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Park in view of Marcenaro et al. (hereinafter "Marcenaro"). Claims 6 and 19 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Park in view of Harville. Claims 7 and 20 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Park in view of Magarey. Claims 8 and 21 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Park in view of Senior et al. (hereinafter "Senior"). Claims 10 and 23 were rejected under 35 U.S.C. §103 over Park in view of Magarey. Claims 11 and 24 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over park in view of Sittler.² Each of these still-pending claims depends directly or indirectly from either independent claim 1 or 14. Applicant submits that none of the secondary references (Marcenaro, Harville, Margarey, Senior or Sittler) resolve the above-described deficiencies with respect to claims 1 and 14. Applicant therefore respectfully requests that the various rejections of the above-identified claims under 35 U.S.C. §103 be withdrawn.

² Claims 11 and 24 have been canceled. The substantive limitations of claims 11 and 24 have been incorporated into base independent claims 1 and 14.

Moreover, while dependent claims 7 and 20 require performing an updating “if an object model is not matched to a detected object in the received image”, Margarey performs updating if tracking is not lost. That is, claims 7 and 20 performs updating when tracking is lost, Margarey performs updating if tracking is not lost

New Claims:

New claims 24-38 have been added. Each of these claims depends from either base independent claim 1, 13 or 14. Applicant thus submits that each of these dependent claims is allowable at least for the same reasons discussed above with respect to claims 1, 13 or 14.

Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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